VOLUME 1

I-80/SR 65 Interchange Improvements Project

Draft Environmental Impact Report/ Environmental Assessment

Placer County, Interstate 80 and State Route 65

03-PLA-80-PM 1.9 to 6.1

03-PLA-65-PM R4.8 to R7.3

EA 03-4E3200/EFIS 0300000696

Prepared by the State of California Department of Transportation and Placer County Transportation Planning Agency

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Caltrans

PLACER COUNTY TRANSPORTATION PLANNING AGENCY

July 2015

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Environmental Impact Report/Environmental Assessment (EIR/EA), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Placer County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is also the lead agency under California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document. Additional copies of this document and the related technical studies are available for review at Placer County Transportation Planning Agency's offices at 299 Nevada St, Auburn, CA 95603, Caltrans' District 3 offices located at 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833 and at the library locations listed below. This document may also be downloaded at the following website: www.8065Interchange.org.

Auburn Library 350 Nevada Street Auburn, CA 95603	Granite Bay Library 6475 Douglas Blvd. Granite Bay, CA 95746	Lincoln Library 485 Twelve Bridges Dr. Lincoln, CA 95648	Loomis Library 6050 Library Drive Loomis, CA 95650
Rocklin Library 4890 Granite Drive Rocklin, CA 95677	Downtown Roseville Library 225 Taylor Street Roseville, CA 95678	Maidu Library 1530 Maidu Drive Roseville, CA 95661	Martha Riley Library, 1501 Pleasant Grove Blvd. Roseville, CA 95747

- Attend the public hearing. A public hearing will be held to present the project and solicit comments on the Draft EIR/EA. The hearing will be on Wednesday, August 26 at 9:15 a.m., or as soon as possible thereafter, at Placer County Transportation Planning Agency regularly scheduled Board meeting located at 175 Fulweiler Avenue, Auburn, CA 95603.
- Tell us what you think. If you have any comments about the proposed project, please attend the pubic workshop and/or send your written comments to Caltrans by the deadline.
- Send comments via postal mail to:

  Kendall Schinke, Environmental Branch Chief
  Attention: Ken Lastufka
  Caltrans District 3 South, 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833
- Send comments via email to: ken.lastufka@dot.ca.gov.
- Be sure to send comments by the deadline: September 16, 2015

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the FHWA, may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, the project proponent could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Gilbert Mohtes-Chan, Public Information Office, California Department of Transportation, 703 B St., Marysville, CA 95901; (530) 741-4572. Voice, or use the California Relay Service TTY number, 711.

SCH#: 2013012003
03-PLA-80-PM 1.9 to 6.1; 03-PLA-65-PM R4.8 to R7.3
EA 03-4E3200/EFIS 0300000696

I-80/SR 65 Interchange Improvements Project

Improve the I-80/SR 65 Interchange on I-80 from the Douglas Boulevard interchange to the Rocklin Road interchange (post miles 1.9–6.1) and on SR 65 from the I-80 separation to the Pleasant Grove Boulevard interchange (post miles R4.8–R7.3) in Placer County

Draft
Environmental Impact Report/Environmental Assessment

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2) C

STATE OF CALIFORNIA
Department of Transportation
and the
PLACER COUNTY TRANSPORTATION PLANNING AGENCY

Approved By: _____ Date: 7-31-15

Cindy Anderson, North Regional Environmental Division Chief
California Department of Transportation
NEPA and CEQA Lead Agency

The following persons may be contacted for more information about this document:

Kendall Schinke
Environmental Senior, Caltrans District 3
2379 Gateway Oaks Drive, #150
Sacramento, CA 95833
(916) 274-0610

Luke McNeel-Caird
Placer County Transportation Planning Agency
299 Nevada Street
Auburn, CA 95603
(530) 823-4030

Summary

Introduction

The California Department of Transportation (Caltrans), in cooperation with the Placer County Transportation Planning Agency (PCTPA), Placer County, and the Cities of Roseville, Rocklin, and Lincoln, proposes to improve the Interstate 80/State Route 65 (I-80/SR 65) interchange in Placer County, California, to reduce future traffic congestion, improve operations and safety, and comply with current Caltrans and local agency design standards. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is also the lead agency under California Environmental Quality Act (CEQA).

Overview of Project Area

The project is located in Placer County in the cities of Roseville and Rocklin at the I-80/SR 65 interchange (Figure 1-1 in Chapter 1). Land uses in and around the project area include suburban single-family residential development; large-scale office and retail developments with associated surface parking; a variety of public and institutional uses including parks, open space and Class I trails, an electrical substation, a high school, an elementary school, a group of small to mid-sized medical institutions, and several churches. Union Pacific Railroad tracks run parallel to I-80 and Taylor Road/Atlantic Street.

Other Proposed Actions in the Project Vicinity

A number of other transportation and development projects are planned in the vicinity of the proposed project. Major transportation projects planned adjacent to the proposed project include those listed below. See Sections 2.5, "Traffic and Transportation/Pedestrian and Bicycle Facilities" and 2.22, "Cumulative Impacts" for more comprehensive lists of planned projects in the vicinity of the proposed project.

- I-80 Auxiliary Lanes – PCTPA is currently working on the environmental document for improvements on westbound I-80 from Douglas Boulevard to Riverside Avenue and eastbound I-80 from SR 65 to Rocklin Road.
- SR 65 Widening – PCTPA is currently working on the environmental document for improvements from Galleria Boulevard/Stanford Ranch Road to Lincoln Boulevard.
- SR 65/Whitney Ranch Parkway/Placer Parkway Interchange – The City of Rocklin is currently constructing a partial cloverleaf interchange with connections to Whitney Ranch Parkway to the east. Placer County is currently working on the environmental document for the first segment of Placer Parkway from SR 65 to Foothills Boulevard.
- I-80/Rocklin Road Interchange – The City of Rocklin is proposing improvements to be made to Rocklin Road and the on- and off-ramps at the I-80 interchange.

Purpose and Need

The proposed project would reduce future traffic congestion, improve operations and safety, and bring the roads into compliance with current Caltrans and local agency design standards. Construction of the proposed improvements has independent utility. The project is not dependent on other projects or improvements to meet the purpose and need.

Termini (i.e., limits) for the project were developed through an iterative process involving engineering design and traffic operations analysis. Preliminary design concepts were tested with the traffic operations analysis model to evaluate how lane transitions and vehicle weaving influenced peak-hour conditions. Refinements were made to ensure that mainline lane balance was logical and that transitions did not cause unacceptable traffic operations such as extensive queuing or reduced speeds.

Purpose

The purpose and objectives of the project are listed below.

- Upgrade the I-80/SR 65 interchange and adjacent transportation facilities to reduce no-build traffic congestion.
- Upgrade the I-80/SR 65 interchange and adjacent transportation facilities to comply with current Caltrans and local agency design standards for safer and more efficient traffic operations while maintaining and, if feasible, improving the current level of community access, at a minimum.
- Consider all travel modes and users in developing project alternatives.

Need

The project is needed for the following reasons.

- Recurring morning and evening peak-period demand exceeds the current design capacity of the I-80/SR 65 interchange and adjacent transportation facilities, creating traffic operations and safety issues. These issues result in high delays, wasted fuel, and excessive air pollution and greenhouse gas emissions, all of which will be exacerbated by traffic from future population and employment growth.
- Interchange design features do not comply with current Caltrans design standards for safe and efficient traffic operations and limit the existing community access to nearby land uses.
- Travel choices are limited in the project area because the transportation network does not include facilities for all modes and users consistent with the complete streets policies of Caltrans and local agencies.

Proposed Action

Three build alternatives are under consideration in this Environmental Impact Report/Environmental Assessment (EIR/EA) and were designed to satisfy the purpose and need identified above, while avoiding or minimizing environmental impacts.

- Alternative 1—Taylor Road Full Access Interchange
- Alternative 2—Collector–Distributor (C-D) System Ramps
- Alternative 3—Taylor Road Interchange Eliminated

The project limits consist of I-80 from the Douglas Boulevard interchange to the Rocklin Road interchange (post miles 1.9–6.1) and SR 65 from the I-80 separation to the Pleasant Grove Boulevard interchange (post miles R4.8–R7.3) in the cities of Roseville and Rocklin and Placer County. The total length of the project is 2.5 miles along SR 65 and 4.2 miles along I-80. The project area also includes various local roads—specifically, portions of Galleria Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, Eureka Road/Atlantic Street, East Roseville Parkway, and Taylor Road.

The three build alternatives under consideration would add capacity, a bi-directional high-occupancy vehicle (HOV) system, and high-speed connector ramps. Local and regional circulation and access would be improved, as would vehicle lane-weaving conditions along I-80 between Eureka Road/Atlantic Street and Taylor Road and along SR 65 between the I-80/SR 65 interchange and Galleria Boulevard/Stanford Ranch Road. Other improvements would include widening the East Roseville Viaduct, replacing the Taylor Road overcrossing, and realigning the existing eastbound I-80 to northbound SR 65 loop connector. The project is described in detail in Chapter 1 and Figure 1-1, in that chapter, shows the project vicinity and location.

Alternative 1 (Taylor Road Full Access Interchange) provides for an improved Taylor Road interchange access but has less than desirable effects on I-80 and the system interchange. Alternative 1 is not acceptable to the Federal Highway Administration (FHWA) and Caltrans because it still allows weaving conditions between the Eureka Road/Atlantic Street, Taylor Road, and SR 65 interchanges that result in increased congestion and reduced safety on I-80 eastbound. Alternative 2 would solve this issue by separating the Eureka Road/Atlantic Street and Taylor Road weaving movements from the I-80 freeway, while still maintaining the existing access to Taylor Road.

Alternative 2 would provide eastbound access to Taylor Road at the Atlantic Street/Eureka Road interchange via (Collector-Distributor [C-D] System Ramps) and would restrict local traffic from leaving or entering I-80 mainline until after the critical weave area between Eureka Road and the I-80/SR 65 interchange. The two existing Taylor Road interchange ramps would remain in their current location but would be reconfigured to accommodate the surrounding improvements.

Alternative 3 (Taylor Road Interchange Eliminated) would eliminate the Taylor Road interchange, transferring the local access to the adjacent Eureka Road/Atlantic Street, Galleria Boulevard/Stanford Ranch Road, and Rocklin Road interchanges. Construction of the original I-80/SR 65 interchange and adjacent interchanges has reduced local access to Taylor Road, resulting in a strain on the local roadways, especially Eureka Road/Atlantic Street. Alternative 3 would result in negative impacts to businesses with significant out-of-direction travel that is unacceptable to local agencies. Alternative 2 would solve this issue by maintaining the existing access to Taylor Road.

Substantial contributions from many different disciplines at FHWA and Caltrans assisted the Project Development Team (PDT) in developing the three build alternatives under consideration. As a result of this collaboration, PCTPA and Caltrans have identified a preferred alternative subject to selection after public review and comment, Alternative 2 (Collector–Distributor [C-D] System Ramps). Because the engineering design is limited by the available area in and adjacent to the interchange, the impact footprint of the three build alternatives are not substantially different from each other. Further, Alternative 2 is a solution to the need for the project that is acceptable to the local agencies, Caltrans, and FHWA.

Alternative 2 was found to meet all aspects of the need and purpose, over and above Alternatives 1 and 3, by providing a separation of the ramp and freeway movements on I-80 eastbound, which will reduce traffic congestion, compared to Alternative 1, and maintain the existing Taylor Road ramps, access that would be eliminated under Alternative 3.

Joint California Environmental Quality Act/National Environmental Policy Act Documentation

The proposed project is a joint project by Caltrans and FHWA, and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under CEQA and NEPA. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, quite often a "lower level" document is prepared for NEPA. One of the most common joint document types is an EIR/EA, which is proposed for this project.

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) or require an Environmental Impact Statement for compliance with NEPA. A Notice of Availability of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

Potential Environmental Consequence and Avoidance, Minimization and/or Mitigation Measures

Project impacts would occur in the following resource areas: Recreation, Community Impacts, Emergency Services, Traffic and Transportation, Visual/Aesthetics, Cultural Resources, Hydrology, Water Quality, Geology/Soils/Seismic, Paleontology, Hazardous Waste, Air Quality,

Noise, and Biology. Significant and unavoidable impacts under CEQA would occur in the following resource areas: Visual/Aesthetics. Project effects under NEPA are discussed fully in Chapter 2. Chapter 3 addresses impacts under CEQA. Table S-2, located at the end of this summary, summarizes the impacts of the project.

Coordination with Other Public Agencies

Notice of Preparation

A Notice of Preparation (NOP) was published on January 2, 2013. It was filed with the State Clearinghouse and sent to the appropriate elected officials, agencies, and interested parties.

A public scoping meeting/community workshop for the EIR/EA was held on January 15, 2013, from 6:00 to 8:00 p.m. at the Maidu Community Center, 1550 Maidu Drive, Roseville, California 95661. The meeting was announced in the NOP and via a news release on December 14, 2012. The purpose of the scoping meeting was to identify concerns of both the public and agencies in order to clearly define the environmental issues and alternatives to be examined in the draft EIR/EA. Maps and other project information displays were available, and Caltrans staff were on hand to answer questions and receive comments regarding the scope and content of the EIR/EA.

Information pertaining to the scoping process and the public open house scoping meeting also appeared on the PCTPA website at http://8065interchange.org.

Necessary Permits and Approvals

The table below shows the permits and approvals that would be required.

Table S-1. Permits and Approvals

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Coordination and Section 7 consultation regarding threatened and endangered species Amendment to City of Roseville *Open Space Preserve Overarching Management Plan*	Initiated formal consultation for threatened and endangered species on April 24, 2015
National Marine Fisheries Service	Coordination and Section 7 consultation regarding threatened and endangered species	Informal consultation/ technical assistance initiated August 2014 Submitted documentation on April 24, 2015, requesting agency determination
U.S. Army Corps of Engineers	Section 404 authorization for fill of waters of the United States	Submitted delineation of potential waters of the United States, including wetlands, on March 4, 2015, to support a preliminary jurisdictional determination Permit application process not yet initiated
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	Not yet initiated
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification and coverage under the existing Caltrans National Pollutant Discharge Elimination System Permit (Order No. 2012-0011-DWQ)	Not yet initiated
Central Valley Flood Protection Board	Permit for encroachment into jurisdictional floodway	Not yet initiated
Placer County Air Pollution Control District	Formal notification prior to construction	Not yet initiated

Table S-2. Comparison of Alternatives

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
HUMAN ENVIRONMENT					
2.1—Land Use					
Consistency with City of Roseville General Plan	Consistent	Consistent	Consistent	Consistent	None required
Consistency with City of Rocklin General Plan	Consistent	Consistent	Consistent	Consistent	None required
Placer County Transportation Planning Agency Regional Transportation Plan	Consistent	Consistent	Consistent	Consistent	None required
Limited Access to Miners Ravine Trail During Construction	No effect	No effect	Miners Ravine Trail will require a temporary detour during construction	Same as Alternative 2	The City of Roseville will provide advance notification of the Miners Ravine Trail closure on its websites and trailheads. Notices will include trail closure dates, approximate duration, and description of the detour available during closure. The City of Roseville will post signs at the Miners Ravine Trail trailheads and closure points, depicting the detour
Possible Inadvertent Damage to Antelope Creek or Miners Ravine Trail as a Result of Construction	No effect	Potential damage to trails during construction	Same as Alternative 1	Same as Alternative 1	Area affected will be restored to the condition that existed prior to construction activities or better
2.2—Growth					
Potential to Induce Growth	No effect	Due to developed nature of project area, the project would not be growth-inducing	Same as Alternative 1	Same as Alternative 1	None required

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.3—Community Impacts					
Community Character and Cohesion	No effect	No separation or division of an existing neighborhood	Same as Alternative 1	Elimination of Taylor Road would reduce access to businesses and residential areas	None required
Displacement of Residences and Businesses	No effect	No residential or business displacements Right-of-way acquisition of 11.68 acres; strips of open space and commercial land, and parking spaces 8 partial and 2 full property takes necessary	No residential or business displacements Right-of-way acquisitions of 12.56 acres; strips of open space and commercial land, and parking spaces 9 partial and 2 full property takes necessary	No residential or business displacements Right-of-way acquisition of 12.44 acres; strips of open space and commercial land, and parking spaces 9 partial and 2 full property takes necessary	None required
Environmental Justice	No effect	No disproportionate effect to minority or low-income populations	Same as Alternative 1	Same as Alternative 1	None required
2.4—Utilities/Emergency Services					
Potential Effect to Utilities	No effect	Possible impacts on utilities or interruption of service during construction	Same as Alternative 1	Same as Alternative 1	Advance notification and coordination with utility service providers prior to and during construction
Potential Effects on Police, Fire, and Emergency Service Providers during Construction	No effect	Short-term lane closures during construction	Same as Alternative 1	Same as Alternative 1	Prepare Transportation Management Plan (TMP) with input (regarding detours, truck routes, notifications, etc.) from emergency service providers

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.5—Traffic and Transportation/Pedestrian and Bicycle Facilities					
Design Year (2040) Network Performance	Would not serve peak-period demand volumes; overall network (highways, roads and streets used for vehicular movement) performance reduced as compared to all build alternatives	Nearly all peak-period demand volumes served; lower delay during p.m. peak period, lower travel times for SOVs and high-occupancy vehicles (HOVs); HOV travel times improved.	Nearly all peak-period demand volumes served; lower delay and higher average speed during a.m. peak period; HOV travel times improved.	Nearly all peak-period demand volumes served; HOV travel times improved.	None required
Construction Year (2020) Network Performance	Overall network performance reduced as compared to all build alternatives; does not serve peak-period demand volume	Would serve all of peak-period demand volumes; improved a.m. and p.m. travel times	Would serve all of peak-period demand volumes; lowest delay and highest average speed during p.m. peak period; a.m. SOV travel time increased from Blue Oaks Blvd. to Antelope Rd.; improved a.m. and p.m. travel times	Would serve all of peak-period demand volumes; slightly lower delays for a.m. peak period; improved a.m. and p.m. travel times	None required
Design Year (2040) Freeway Operations	28 locations operating at unacceptable level of service thresholds (LOS)* *acceptable LOS is defined by each of the jurisdictions in the project area. See Section 2.5.2.3 for more information	30 locations operating at unacceptable LOS and operating worse than the No Build Alternative	29 locations operating at unacceptable LOS and operating worse than the No Build Alternative	28 locations operating at unacceptable LOS and operating worse than the No Build Alternative	Implement regional coordination for transportation improvements as part of current ongoing projects, capital improvement program updates, and traffic impact fee updates

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Design Year (2040) Intersection Operations	17 locations operating at unacceptable LOS	5 locations operating at unacceptable LOS and operating worse than the No Build Alternative	4 locations operating at unacceptable LOS and operating worse than the No Build Alternative	8 locations operating at unacceptable LOS and operating worse than the No Build Alternative	Implement regional coordination for transportation improvements as part of current ongoing projects, capital improvement program updates, and traffic impact fee updates
Construction Year (2020) Freeway Operations	36 locations operating at unacceptable LOS	8 locations operating at unacceptable LOS and operating worse than the No Build Alternative	7 locations operating at unacceptable LOS and operating worse than the No Build Alternative	6 locations operating at unacceptable LOS and operating worse than the No Build Alternative	Implement regional coordination for transportation improvements as part of current ongoing projects, capital improvement program updates, and traffic impact fee updates
Construction Year (2020) Intersection Operations	10 locations operating at unacceptable LOS	3 locations operating at unacceptable LOS and operating worse than the No Build Alternative	2 locations operating at unacceptable LOS and operating worse than the No Build Alternative	2 locations operating at unacceptable LOS and operating worse than the No Build Alternative	Implement regional coordination for transportation improvements as part of current ongoing projects, capital improvement program updates, and traffic impact fee updates
Construction Period Disruption of Vehicle Circulation	No effect	Traffic flow disrupted during construction	Same as Alternative 1	Same as Alternative 1	Implement a Transportation Management Plan (TMP)
Construction Period Disruption of Pedestrian/Bicycle Circulation	No effect	Taylor Road curb, gutter, and sidewalk improvements would benefit pedestrians; minor access change during construction of Antelope Creek Trail realignment	Taylor Road curb, gutter, and sidewalk improvements would benefit pedestrians; minor access change during construction of Antelope Creek Trail realignment; Miners Ravine Trail will require a temporary detour during construction	Taylor Road curb, gutter, and sidewalk improvements would benefit pedestrians; minor access change during construction of Antelope Creek Trail realignment; Miners Ravine Trail will require a temporary detour during construction	Detour provided during construction Falsework construction to be scheduled when least likely to affect users (e.g., weekdays) Traffic control measures used to maintain safety and flow of travel on trails

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.6—Visual/Aesthetic					
Temporary Visual Impacts Caused by Construction Activities	No effect	Construction equipment and personnel, vegetation removal, would result in adverse visual effects; undercrossing would result in slightly more visible construction activities	Construction equipment and personnel, vegetation removal, would result in adverse visual effects; slightly more vegetation removal on northeast side of I-80	Construction equipment and personnel, vegetation removal, would result in adverse visual effects; slightly less construction and vegetation removal than Alternative 2	None required
Permanent Changes in Visual Quality and Character - I-80 Corridor	No effect	Overall visual quality change moderately low	Visual quality change low to moderate	Same as Alternative 2	Use native grass and wildflower species in erosion control grassland seed mix Implement interchange and slope landscaping and visual barriers Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors
Permanent Changes in Visual Quality and Character – SR 65 Corridor	No effect	Overall visual quality would remain moderate	Same as Alternative 1	Same as Alternative 1	Use native grass and wildflower species in erosion control grassland seed mix Implement interchange and slope landscaping and visual barriers Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Permanent Changes in Visual Quality and Character – Open Space	No effect	Overall visual quality slightly reduced but would remain moderate-high	Same as Alternative 1	Same as Alternative 1	Use native grass and wildflower species in erosion control grassland seed mix Implement interchange and slope landscaping and visual barriers Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors
Permanent Changes in Visual Quality and Character – Residential	No effect	Overall visual quality would decrease from moderate to moderate-low	Same as Alternative 1	Same as Alternative 1	Use native grass and wildflower species in erosion control grassland seed mix Implement interchange and slope landscaping and visual barriers Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors
Permanent Changes in Visual Quality and Character – Commercial/Institutional	No effect	Overall visual quality would decrease from moderate to moderate-low	Same as Alternative 1	Same as Alternative 1	Use native grass and wildflower species in erosion control grassland seed mix Implement interchange and slope landscaping and visual barriers Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Short-Term Light and Glare	No effect	Increased light and glare during construction	Same as Alternative 1	Same as Alternative 1	Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors
Permanent Light and Glare	No effect	Increase in visible glare due to the addition/expansion of vertical surfaces (lane barriers, retaining walls); new light placed at a higher elevation	Same as Alternative 1	Same as Alternative 1	Implement project design aesthetics Minimize fugitive light from portable sources used for construction Apply minimum lighting standards Install visual barriers between construction work areas and sensitive receptors
2.7—Cultural Resources					
Effects on Known Resources from Construction	No effect	Potential to disturb known buried cultural resources during construction and potential to affect one architectural/built environment resource	Same as Alternative 1	Same as Alternative 1	Flag sensitive area and prepare and ESA Action Plan Conduct mandatory cultural resources awareness Training for construction personnel Retain a qualified archaeologist and a Native American monitor to conduct monitoring during construction in areas sensitive for cultural resources Avoid or proceed with caution in locations determined by investigations to have potential subsurface resources Implement avoidance and notification procedures for cultural resources Conduct Phase III Data Recovery
Effects on Unknown Resources from Construction	No effect	Potential to disturb buried cultural resources during construction	Same as Alternative 1	Same as Alternative 1	Avoid or proceed with caution in locations determined by investigations to have potential subsurface resources Implement avoidance and notification procedures for cultural resources

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Discovery of Human Remains during Construction	No effect	Potential to disturb buried human remains during construction	Same as Alternative 1	Same as Alternative 1	Protect human remains if encountered during excavation activities as per State Health and Safety Code Section 7050.5 and Public Resources Code 5097.98
PHYSICAL ENVIRONMENT					
2.8—Hydrology and Floodplain					
Increase in Impervious Area	No effect	Increased impervious surface area slightly greater under this alternative and could increase the rate and volume of stormwater runoff with the potential for localized flooding	Increased impervious surface area less than Alternative 1 and associated impacts considered minor	Increased impervious surface area less than Alternative 1 and associated impacts considered minor	None required
Potential for Increased Scour	No effect	Geotechnical analysis at the proposed bridges indicates that soils generally will be resistant to scour	Same as Alternative 1	Same as Alternative 1	None required
2.9—Water Quality					
Potential Water Quality, Erosion and Sediment Control Issues during Construction	No effect	Potential for sediment or pollutants associated with construction to enter waterways during construction	Same as Alternative 1	Same as Alternative 1	Implement Storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs)
Potential Water Quality, Erosion and Sediment Control Issues during Operations	No effect	Potential for sediment or pollutants associated with operations to enter waterways	Same as Alternative 1	Same as Alternative 1	Implement permanent design pollution prevention BMPs

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.10—Geology/Soils/Seismic/Topography					
Risk of Seismic Hazards or Ground Shaking during Operations	No effect	Potential for seismic activity is low; however, slope stability is an issue because weak claystones may be present	Same as Alternative 1	Same as Alternative 1	Compliance with the appropriate building regulations would ensure that the viaduct, roads, walls, and other project features are not damaged as a result of seismic activity. Area will be evaluated for soil stability further during final design
Risk of Landslides or Other Slope Failure during Operations	No effect	Potential for landsliding is low except in eastern portion of the interchange area, where the claystone may be present and could affect slope stability	Same as Alternative 1	Same as Alternative 1	Cut-and-fill slopes in native soils and engineered fill would be designed to have slopes no greater than 2H:1V which is considered stable for the project site conditions. Area will be evaluated for soil stability further during final design
Runoff, Erosion, and Sedimentation from Grading Activities Associated with Construction	No effect	Potential impact during construction activities	Same as Alternative 1	Same as Alternative 1	Implementation of Caltrans' Construction Site BMPs Manual, SWPPP, and Water Pollution Control Program (WPCP) Manual
Risk During Operation as a Result of Development on Expansive Soil during Operations	No effect	Soils in the project area have low-moderate shrink-swell potential	Same as Alternative 1	Same as Alternative 1	Structures will be designed to meet the regulations and standards associated with Uniform Building Code Seismic Hazard/California Building Standards Commission standards, Caltrans standards, and (if applicable) local standards to minimize potential shrink swell hazards on associated project features

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.11—Paleontology					
Destruction of Vertebrate or Otherwise Scientifically Significant Paleontological Resources as a Result of Construction Activities	No effect	Excavation in sensitive units could result in the inadvertent destruction of fossil resources	Same as Alternative 1	Same as Alternative 1	Train construction personnel in recognizing fossil material. Stop work and consult with a qualified professional paleontologist if fossil remains are encountered during construction. Add the following Resource Stewardship Measures to the project's standard specification: If paleontological resources are discovered at the job site, do not disturb the material and immediately: 1. Stop all work within a 60-foot radius of the discovery 2. Protect the area 3. Notify the Resident Engineer The project proponent investigates and modifies the dimensions of the protected area if necessary. Do not take paleontological resources from the job site. Do not resume work within the specified radius of the discovery until authorized. A specification alerting the construction contractor that paleontological monitoring will occur during activities that will disturb native sediments will also be added to the project's specifications.
2.12—Hazardous Waste/Materials					
Potential for Exposure of Humans and the Environment to Hazardous Conditions from the Accidental Release of Hazardous Materials as a Result of Construction Activities	No effect	Potential for accidental release of materials associated with construction equipment	Same as Alternative 1	Same as Alternative 1	Implement a Health and Safety Plan

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential for Exposure of Unknown Hazardous Materials to Humans or the Environment as a Result of Construction Activities	No effect	Hazardous materials present may include heavy metals, asbestos-containing materials (ACM), lead containing paint (LCP), contaminated soils, aerially deposited lead (ADL), and treated wood waste	Same as Alternative 1	Same as Alternative 1	Additional site assessments will be conducted of Assessor's Parcel Number 015-162-005 and 015-162-007 prior to construction Implement appropriate avoidance or remediation measures according to state and federal regulations Develop a lead abatement plan and an asbestos abatement plan
Potential for Exposure of Known Hazardous Materials to Humans or the Environment as a Result of Construction Activities	No effect	Hazardous materials present may include heavy metals, ACM, LCP, contaminated soils, polychlorinated biphenyls, and ADL	Same as Alternative 1	Same as Alternative 1	Handle, remove, store, and dispose traffic striping according to Health and Safety Plan Conduct soil testing and if contaminated, dispose in accordance with appropriate regulations Coordinate with utility companies for relocation of towers
2.13—Air Quality					
Conformity With the Regional Transportation Plan	No effect	Phase I is included in the 2035 Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS) and 2015-2018 Metropolitan Transportation Improvement Program (MTIP); complete project (Phases 1-4) will be included in the upcoming 2036 MTP/SCS	Same as Alternative 1	Same as Alternative 1	None required

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Violation of Carbon Monoxide National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS)	Not anticipated to exceed 1- or 8-hour NAAQS or CAAQS	Not anticipated to exceed 1- or 8-hour NAAQS or CAAQS	Same as Alternative 1	Same as Alternative 1	None required
Potential Violation of PM2.5 NAAQS and CAAQS	No effect	Project not considered to be a project of air quality concern and project-level particulate matter conformity determination requirements are satisfied	Same as Alternative 1	Same as Alternative 1	None required
Potential Increase in Roadway Vehicle Emissions	Lower emissions than all alternatives	Increase in criteria pollutants and vehicle emissions due to expanded capacity which would result in reduced travel times and an increased demand and associated vehicle miles travelled(VMT)	Same as Alternative 1	Same as Alternative 1	None required because of traffic operation improvements resulting from the build alternatives
Potential Temporary Increase in Ozone Precursors (reactive organic gases and nitrogen dioxide), carbon monoxide, particles of 10 micrometers or smaller (PM10), particles of 2.5 micrometers or smaller (PM2.5), and carbon dioxide Emissions during Grading and Construction Activities	No effect	Temporary increase in all ozone precursors due to construction	Same as Alternative 1	Same as Alternative 1	Addressed by construction-related emission minimization measures and fugitive dust emissions control in the Caltrans' Standard Specifications Section 14 Implement Measures to reduce exhaust emissions from off-road diesel powered equipment

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Asbestos Emissions During Construction Activities	No effect	Potential asbestos-containing materials released during demolition of structures	Same as Alternative 1	Same as Alternative 1	Demolition of structures containing asbestos will be regulated under Environmental Protection Agency National Emissions Standards for Hazardous Air Pollutants and California Air Resources Board (ARB's) Airborne Toxic Control measures Implement a Health and Safety Plan
Potential Generation of Significant Levels of mobile source air toxics (MSAT) Emissions	Lower MSAT emissions than all alternatives under 2020; slightly higher under 2040 conditions	Slight increase of diesel particulate matter (DPM) under 2020 conditions and benzene and DPM under 2040 conditions; Slight increase in formaldehyde and acetaldehyde emissions under 2040 conditions	Slight increase of DPM under 2020 conditions and benzene and DPM under 2040 conditions	Slight increase of DPM under 2020 conditions and benzene and DPM under 2040 conditions	None required because of traffic operation improvements resulting from the build alternatives
2.14—Noise and Vibration					
Exposure of Noise Sensitive Land Uses to Increased Traffic Noise	Noise levels would increase as traffic congestion increases	Traffic noise levels are predicted to exceed the noise abatement criteria in the project area under design year conditions	Same as Alternative 1	Same as Alternative 1	Project proponent will implement the recommendations of the Noise Abatement Decision Report. The report recommends construction of four noise barriers
Exposure of Noise Sensitive Land Uses to Construction Noise	No effect	Construction equipment would generate noise	Same as Alternative 1	Same as Alternative 1	Addressed by construction related noise minimization measures in Caltrans' Standard Specifications

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.15—Energy					
Energy Consumption During Construction and Operations	No effect	During operations, overall network performance compared to no-build conditions would improve increasing fuel efficiency. This balances energy used during construction with energy savings post-construction	Same as Alternative 1	Same as Alternative 1	None required
BIOLOGICAL ENVIRONMENT					
2.16—Natural Communities					
Loss or Disturbance of Non-Wetland Riparian Woodland Resulting from Construction	No effect	Permanent loss of 0.331 acre; temporary disturbance of 1.152 acres	Permanent loss of 0.461 acre; temporary disturbance of 1.039 acres	Permanent loss of 0.540 acre; temporary disturbance of 1.059 acres	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including shaded riverine aquatic (SRA) cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Permanent Loss of Oak Woodlands	No effect	Permanent loss of 6.368 acres	Permanent loss of 6.141 acres	Permanent loss of 6.174 acres	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin)
2.17—Wetlands and Other Waters					
Loss or Disturbance of Riparian Forest/Scrub Wetland Resulting from Construction	No effect	Permanent loss of 0.004 acre; temporary disturbance of 0.181 acre	Same as Alternative 1	Same as Alternative 1	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Loss or Disturbance of Emergent Wetland Resulting from Construction	No effect	Permanent loss of 0.116 acre; temporary disturbance of 0.194 acre	Same as Alternative 1	Same as Alternative 1	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank
Loss or Disturbance of Seasonal Wetland Resulting from Construction	No effect	Permanent loss of 0.115 acre; temporary disturbance of 0.066 acre	Same as Alternative 1	Same as Alternative 1	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Loss of vernal Pool Resulting from Construction	No effect	Permanent loss of 0.030 acre	Same as Alternative 1	Same as Alternative 1	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank
Loss or Disturbance of Perennial Stream Resulting from Construction	No effect	Permanent loss of 0.034 acre; temporary disturbance of 0.056 acre	Permanent loss of 0.004 acre	Permanent loss of 0.007 acre	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Loss of Intermittent Stream Resulting from Construction	No effect	Permanent loss of 0.003 acre	Same as Alternative 1	Same as Alternative 1	Install fencing around the construction area to protect sensitive biological resources to be avoided Conduct environmental awareness training for construction employees Retain a biological monitor to conduct visits during construction in sensitive habitats Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank
2.18—Plant Species					
None	N/A	Special-status plants were not observed within the biological study area (BSA) during appropriately timed botanical surveys; therefore, special-status plants are not expected to occur in the BSA and would not be affected by the proposed project	Same as Alternative 1	Same as Alternative 1	None required
2.19—Animal Species					
Potential Loss or Disturbance of Western Spadefoot and/or Loss of Aquatic Breeding Habitat	No effect	Permanent loss of 0.119 acre; temporary disturbance of 0.308 acre	Same as Alternative 1	Permanent loss of 0.119 acre; temporary disturbance of 0.313 acre	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
					Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for temporary and permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank Provide escape ramps for wildlife and inspect pits and trenches daily
Potential Loss or Disturbance of Western Spadefoot and/or Loss of Upland Habitat	No effect	Permanent loss of 0.085 acre; temporary disturbance of 3.901 acres	Same as Alternative 1	Same as Alternative 1	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
					Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for temporary and permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank Provide escape ramps for wildlife and inspect pits and trenches daily
Potential Loss or Disturbance of Pacific Pond Turtle and/or Loss of Aquatic Habitat	No effect	Permanent loss of 0.034 acre; temporary disturbance of 0.056 acre	Permanent loss of 0.004 acre	Permanent loss of 0.007 acre	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
					bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for temporary and permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank Provide escape ramps for wildlife and inspect pits and trenches daily Conduct a Pre-Construction Survey for Pacific Pond Turtle and Exclude Turtles from Work Area

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Loss or Disturbance of Pacific Pond Turtle and/or Loss of Upland Habitat	No effect	Permanent loss of 5.070 acres; temporary disturbance of 8.166 acres	Permanent loss of 5.383 acres; temporary disturbance of 8.643 acres	Permanent loss of 5.522 acres; temporary disturbance of 8.636 acres	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for temporary and permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Compensate for placement of permanent fill in Waters of the United States/Waters of the State through the purchase of compensatory credits at a USACE-approved mitigation bank Provide escape ramps for wildlife and inspect pits and trenches daily Conduct a Pre-Construction Survey for Pacific Pond Turtle and Exclude Turtles from Work Area

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Loss or Disturbance of Burrowing Owl and/or Loss of Nesting and Foraging Habitat	No effect	Permanent loss of 0.085 acre; temporary disturbance of 2.399 acres	Same as Alternative 1	Same as Alternative 1	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Conduct pre-construction surveys for burrowing owl and establish exclusion zones, if necessary

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Loss or Disturbance of White-Tailed Kite and/or Loss of Nesting and Foraging Habitat	No effect	Permanent loss of 5.070 acres; temporary disturbance of 5.265 acres	Permanent loss of 5.383 acres; temporary disturbance of 4.742 acres	Permanent loss of 5.522 acres; temporary disturbance of 4.735 acres	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and Other Waters through implementation of BMPs and SWPPP Conduct vegetation removal during the non-breeding season and conduct pre-construction surveys for nesting migratory birds and raptors

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Loss or Disturbance of Northern Harrier and/or Loss of Nesting and Foraging Habitat	No effect	Permanent loss of 0.201 acre; temporary disturbance of 2.593 acres	Same as Alternative 1	Same as Alternative 1	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Conduct Vegetation Removal during the Non-Breeding Season and Conduct Pre-Construction Surveys for Nesting Migratory Birds and Raptors

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Disturbance of Active Purple Martin or Other Bridge-Nesting Migratory Bird Nest Due to Removal/Modification of Bridge Structures	No effect	New overpass and bridge structures would replace nesting substrate lost due to structure removal.	Same as Alternative 1	Same as Alternative 1	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Remove or modify existing structures during the non-breeding season for purple martin and other structure-nesting migratory birds or implement exclusion measures to deter nesting

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Loss or Disturbance of Roosting Bats Due to Tree removal/Trimming or Bridge Structure Removal or Modification	No effect	Mortality of tree-roosting or structure-roosting bats during the maternity season or hibernation period that results from tree removal/trimming; I-80 bridge structure would not be modified	Same as Alternative 1	Same as Alternative 1	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for temporary and permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Conduct pre-construction surveys for roosting bats, identify and implement appropriate avoidance and protection measures

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Disturbance of Central Valley fall-/late fall–run Chinook Salmon and their Habitat	No effect	Impairment of water quality, disturbance or direct injury and mortality of fish, and temporary loss of habitat due to construction	Same as Alternative 1	Same as Alternative 1	Prepare and implement SWPPP and BMPs Prevent contaminants and hazardous materials from entering creek Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Minimize Impacts on SRA cover through increase in overwater structure Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Limit all in-channel construction activities to the June 15 to October 15 period

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential Loss of Central Valley fall-/late fall–run Chinook Salmon and their Habitat	No effect	Permanent loss of vegetative cover and potentially undercut banks, reducing habitat complexity	Same as Alternative 1	Same as Alternative 1	Prepare and implement SWPPP and BMPs Prevent contaminants and hazardous materials from entering creek Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Minimize Impacts on SRA cover through increase in overwater structure Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed Compensate for permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Limit all in-channel construction activities to the June 15 to October 15 period

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.20—Threatened and Endangered Species					
Potential for Direct and Indirect Impacts on Valley Elderberry Longhorn Beetle (VELB)	No effects	Construction impacts on elderberry shrub(s) that could contain VELB larvae or adults; direct adverse effect on 2 shrubs indirect adverse effect to 3 shrubs	Same as Alternative 1	Same as Alternative 1	A BA will be prepared as part of federal Endangered Species Act (FESA) Section 7 consultation between Caltrans and USFWS to address project impacts on VELB Install Fencing and/or Flagging to Protect Sensitive Biological Resources Conduct Mandatory Environmental Awareness Training for Construction Personnel Retain a Qualified Biologist to Conduct Monitoring during Construction in Sensitive Habitats Establish a Minimum 20-Foot-Wide Buffer around the Elderberry Shrub Transplant Elderberry Shrubs That Cannot Be Avoided or Implement Dust Control Measures during Construction Compensate for Direct Effects on VELB Habitat by purchasing mitigation credits at a USFWS-approved mitigation bank, or an onsite or offsite conservation area depending on USFWS consultation

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential for Loss or Disturbance of Vernal Pool Fairy Shrimp (VPFS)	No effects	Permanent or temporary fill or excavation of vernal pools could adversely affect fairy shrimp	Same as Alternative 1	Same as Alternative 1	A BA will be prepared as part of FESA Section 7 consultation between Caltrans and USFWS to address project impacts on VPFS Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Avoid and minimize potential indirect impacts on VPFS habitat by avoiding ground disturbance within 250 feet of suitable vernal pool fairy shrimp habitat (i.e., vernal pools) from the first day of the first significant rain (1 inch or greater) until June 1; the use of exclusion fencing; and limiting herbicide use within 100 feet of aquatic habitat Compensate for direct and indirect impacts on VPFS habitat by purchasing mitigation credits at a USFWS-approved mitigation bank or establish a conservation easement on a parcel(s) containing a sufficient amount of existing and restored vernal pool fairy shrimp habitat and adaptively manage the mitigation lands consistent with the most current information on vernal pool fairy shrimp habitat requirements.

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
Potential for Loss or Disturbance of Swainson's Hawk and Nesting and Foraging Habitat	No effects	Permanent loss 5.070 acres; temporary loss of 5.265 acres	Permanent loss 5.383 acres; temporary loss of 4.742 acres	Permanent loss 5.522 acres; temporary loss of 4.735 acres	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Conduct vegetation removal during the non-breeding season and conduct pre-construction surveys for nesting migratory birds and raptors
Potential for Loss or Disturbance of Tricolored Blackbird Nesting and Foraging Habitat	No effects	Permanent loss 0.205 acres; temporary loss of 2.774 acres	Same as Alternative 1	Same as Alternative 1	Install fencing and/or flagging to protect sensitive biological resources Conduct mandatory environmental awareness training for construction personnel Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed
Potential Loss or Disturbance of Central Valley Steelhead and their Habitat	No effects	Adverse effects related to disturbance and direct injury, increased turbidity and sedimentation, potential discharges of contaminants, temporary and permanent loss of SRA cover, and changes to channel morphology and hydraulics	Same as Alternative 1	Same as Alternative 1	Prepare and Implement SWPPP and BMPs Prevent contaminants and hazardous materials from entering creek by implementation of SWPPP and BMPs Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Minimize impacts on SRA cover through increase in overwater structure Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
					Compensate for permanent loss of oak woodlands at a minimum ratio of 1:1 (1 acre restored for every 1 acre permanently affected). Replacement plantings may be planted onsite and/or at offsite locations. If onsite replacement is not feasible, the project proponent will pay an in-lieu fee to the appropriate jurisdiction (i.e., the City of Roseville or the City of Rocklin) Protect water quality and minimize sedimentation runoff in wetlands and other waters through implementation of BMPs and SWPPP Compensate for temporary and permanent impacts on wetlands through the purchase of mitigation bank credits Limit all in-channel construction activities to the June 15 to October 15 period Prevent temporary lighting from directly radiating on water surfaces of Antelope Creek, Miners Ravine, and Secret Ravine during nighttime construction
Potential Loss of Essential Fish Habitat for Fall-Run Chinook Salmon	No effects	Sedimentation and turbidity, hazardous materials and contaminants could lead to temporary and permanent loss of SRA cover	Same as Alternative 1	Same as Alternative 1	Prepare and Implement SWPPP and BMPs Prevent contaminants and hazardous materials from entering creek by implementation of SWPPP and BMPs Retain a qualified biologist to conduct monitoring during construction in sensitive habitats Minimize impacts on SRA cover through increase in overwater structure Compensate for temporary and permanent loss of non-wetland riparian vegetation, including SRA cover through either mitigation bank credit purchase or onsite/offsite restoration in the Dry Creek Watershed

Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
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Table S-2. Comparison of Alternatives Continued

Impact	No Build	Alternative 1 Taylor Road Full Access Interchange	Alternative 2 Collector–Distributor System Ramps	Alternative 3 Taylor Road Interchange Eliminated	Avoidance, Minimization, and/or Mitigation Measures
2.21—Invasive Species					
Potential Introduction and Spread of Invasive Plant Species Resulting from Construction	No effect	Construction activities have the potential to spread invasive plant species	Same as Alternative 1	Same as Alternative 1	Two or more BMPs listed below will be written into the construction specifications and implemented during project construction to avoid and minimize the spread of invasive plant species. • Retain all fill material onsite • Use a weed-free source for project materials • Prevent invasive plant contamination of project materials during transport and when stockpiling • Use sterile wheatgrass seed and native plant stock during revegetation. • Revegetate and/or mulch disturbed soils within 30 days of completion of ground-disturbing activities to reduce the likelihood of invasive plant establishment. Restore disturbed areas using native species

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Appendices (Volume 2)

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List of Abbreviated Terms

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AADT	Annual average daily traffic
AAGR	average annual growth rate
AAQS	ambient air quality standards
AB	Assembly Bill
AB 1493	Assembly Bill 1493
AB 32	Assembly Bill 32
ACHP	Advisory Council on Historic Preservation
ACMs	asbestos-containing materials
ADA	Americans with Disabilities Act
ADI	area of direct impact
ADL	aerially deposited lead
AGR	agricultural supply
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
AMR	American Medical Response
amsl	above mean sea level
APCD	Air Pollution Control District
APN	Assessor's Parcel Number
APE	Area of Potential Effects
ARB	California Air Resources Board
AST	aboveground storage tank
ATCMs	Airborne Toxic Control Measures
Basin Plan	Central Valley RWQCB's Water Quality Control Plan
BMP	Best Management Practices
BSA	biological study area
CAA	federal Clean Air Act
CAAQS	California ambient air quality standards
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
C-D	Collector–Distributor
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
Central Valley Subprovince	Sacramento-San Joaquin Province
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations

CGP	Construction General Permit
CH_4	methane
CHRIS	California Historical Resources Information Center
CIA	Community Impact Assessment
Clearinghouse	California State Clearinghouse
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO-CAT	Coastal Ocean Climate Action Team
CRHR	California Register of Historical Resources
CTC	California Transportation Commission
CTP	California Transportation Plan
CU	control unit
CVFPB	Central Valley Flood Protection Board
CWA	Clean Water Act
dBA	A-weighted decibels
dbh	diameter at breast height
DP-30	Caltrans Director's Policy 30
DPM	diesel particulate matter
DPR	Department of Parks & Recreation
DPS	distinct population segment
DRP	Data Recovery Plan
DSA	Disturbed Soil Area
EA	Environmental Assessment
EFH	essential fish habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EO 11990	Executive Order for the Protection of Wetlands
ESAs	Environmentally Sensitive Areas
F&I	Fatality and injury rate
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FTIPs	Federal Transportation Improvement Programs
g	gravity
GHG	greenhouse gas
GPS	global positioning system
GSRDs	Gross Solids Removal devices
Guidelines	Section 404(b) Guidelines
H:V	horizontal:vertical
H_2S	hydrogen sulfide
HOV	high-occupancy vehicle

HSAs	hydrologic sub-areas
I	Intactness
IND	industrial service supply
I-80	Interstate 80
IPCC	Intergovernmental Panel on Climate Change
ISA	Initial Site Assessment
ITS	Intelligent Transportation Systems
kV	kilovolt
LCFS	Low Carbon Fuel Standard
LCP	lead-containing paint
LEDPA	least environmentally damaging practicable alternative
Leq(h)	A-weighted decibels hourly equivalent sound level
lf	linear feet
LOS	level of service
LSAA	Lake or Streambed Alteration Agreement
LUST	leaking underground storage tank
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MS4	municipal separate storm sewer systems
MSA	Magnuson-Stevens Fishery Conservation and Management Act of 1976
MSAT	mobile source air toxics
MTIP	Metropolitan Transportation Improvement Program
MTP	Metropolitan Transportation Plan
MUN	municipal and domestic water supply
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System

NRHP	National Register of Historic Places
NSR	Noise Study Technical Report
NTUs	nephelometric turbidity units
O_3	ozone
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSPOMP	Open Space Preserve Overarching Management Plan
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement
PA&ED	Project Approval and Environmental Document
PAHs	polycyclic aromatic hydrocarbons
Pb	lead
PCAPCD	Placer County Air Pollution Control District
PCBs	polychlorinated biphenyls
PCFWCD	Placer County Flood Control and Conservation District
PCTPA	Placer County Transportation Planning Agency
PCWA	Placer County Water Agency
PDT	Project Development Team
PEAR	Preliminary Environmental Analysis
PG&E	Pacific Gas and Electric Company
PLCG	Project Level Conformity Group
PM	post mile
PM10	particles of 10 micrometers or smaller
PM2.5	particles of 2.5 micrometers and smaller
POAQC	project of air quality concern
Ppm	parts per million
PRC	Public Resources Code
PRO	Industrial process supply
PSR	project study report
RCEM	Roadway Construction Emissions Model
RCRA	Resource Conservation and Recovery Act of 1976
Resources Agency	California Natural Resources Agency
ROG	reactive organic gases
RTP	Regional Transportation Plan
RWQCBs	Regional Water Quality Control Boards
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SB 375	Senate Bill 375
SB 391	Senate Bill 391
SB 97	Senate Bill 97
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
sec/veh	seconds per vehicle
Section 106 PA	First Amended Programmatic Agreement
SER	Standard Environmental Reference
sf	square foot
SF_6	sulfur hexafluoride

SIP	State Implementation Plan
SMUD	Sacramento Municipal Utilities District
SO_2	sulfur dioxide
SOV	single-occupant vehicles
SPMUD	South Placer Municipal Utility District
SR 65	State Route 65
SRA	shaded riverine aquatic
STPs	Shovel test probes
SVAB	Sacramento Valley Air Basin
SWMP	Statewide Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TASAS	Caltrans Traffic Accident Surveillance and Analysis System
TDS	total dissolved solids
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
TNM	Traffic Noise Model
TSM	Transportation system management
TWG	Technical Working Group
TWW	Treated Wood Waste
U	unity
U.S. EPA	United States Environmental Protection Agency
UAIC	United Auburn Indian Community
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
USTs	underground storage tanks
V	Vividness
VELB	Valley elderberry longhorn beetle
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
WAPA	Western Area Power Administration
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Program
WTP	water treatment plant
WWTPs	wastewater treatment plants
XPI	Extended Phase I testing